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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/011,657	12/04/2001	Gregory E. Missell	83165HEC	6858

7590

03/27/2003

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EXAMINER

GRENDZYNSKI, MICHAEL E

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 03/27/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/011,657	MISSELL ET AL.	
	Examiner	Art Unit	
	Michael E. Grendzynski	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-14 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of copending Application No. 10/011657. Although the conflicting claims are not identical, they are not patentably distinct from each other because the '777 application claims an ink jet printing method comprising the steps of (A) providing an ink jet printer; (B) loading the printer with an ink jet recording element comprising (1) a support and (2) an image-receiving layer thereon including (a) porous polymeric particles and (b) a polyvinyl alcohol binder having a degree of hydrolysis of at least about 95% and having a number average molecular weight of at least about 45,000; (C) loading the printer with ink and (D) printing the element. See claim 1. This claim clearly suggests the existence of an element comprising (1) a support and (2) an image-receiving

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layer thereon including (a) porous polymeric particles and (b) a polyvinyl alcohol binder having a degree of hydrolysis of at least about 95% and having a number average molecular weight of at least about 45,000. The '777 application, moreover, claims the obvious use of the element of the instant application. With regard to claims 2-14 of the '777 application, these claims track the identical compositional limitations of the element articulated in claims 2-14 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The use of the phrase "at least about" in claims 1, 7, 10 and 11 renders the claims ambiguous because the metes and bounds of the claim cannot be ascertained. See MPEP § 2173.05(a). Specifically, the lower threshold values for the degree of hydrolysis and the molecular weight cannot be ascertained. For example, the claims make it clear the degree of hydrolysis must be above a specific value--what is that value? What value is "at least about" 95%? 90%? 85%? 94.9%? It is suggest applicants delete the term "about" from the phrase.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satoshi (JP 2000-203154)(Translation provided) in view of Pope (US 4722868), Shaw-Klein (US 6110601) and Paulson (US 6051306). Applicants claim an ink jet recording medium comprising (1) a support and (2) an image-receiving layer thereon including (a) porous polymeric particles and (b) a polyvinyl alcohol binder having a degree of hydrolysis of at least about 95% and having a number average molecular weight of at least about 45,000. Satoshi discloses an ink jet recording sheet comprising a substrate and an ink-receptive coating. See Abstract. The substrate sheet (claims 1 and 8) is equivalent to applicants' support layer. It comprises paper or a plastic film. See Translation at ¶ 68. These are identical to the supports used by applicants in the instant invention. See specification at p 4, ll 2-6 (revealing the inventive support comprises paper or a plastic film). The ink-receptive coating is equivalent to applicants' image-receiving layer. It comprises porous polymeric particles and a binder. See Translation at ¶ 1, sub. (1). The binder comprises a polyvinyl alcohol polymer. See Translation at ¶ 22 (stating polyvinyl alcohol is a binder). With regard to the claimed degree of hydrolysis (claims 1 and 7) and molecular weight (claims 1 and 14) values, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. The degree of hydrolysis of polyvinyl alcohol is a conventional concern in the art, for it controls the solubility and image receptive properties of the polymer. See Pope at col. 3, ll 57 through col. 4, ll 2. See also Shaw-Klein at col. 3, ll 42-45. Similarly, the molecular weight of polyvinyl alcohol in an ink-receiving layer is a conventional concern in the art, for it, too controls the solubility (water resistance) of the polymer. See Paulson at col. 4, ll 9-16 and ll 44-46. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215. See MPEP § 716.02(a) (stating that evidence of unobvious or unexpected advantageous properties, such as superiority in a property the

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claimed compound shares with the prior art, can rebut prima facie obviousness). To date, this burden has not been sustained. The examiner acknowledges that the evidence provided in the specification suggests improved gloss characteristics when the degree of hydrolysis is 98% and the number average molecular weight is from 60,000-100,000. The evidence, however, is not commensurate in scope with the claims.

With regard to claims 2 & 3, Satoshi discloses that its particles possess a particle size within applicants' claimed size. See Translation at ¶ 7 (disclosing a particle size of 0.05 to 2 μ m).

With regard to claim 4, applicants claim the degree of cross-linking of the porous particles is at 27 mol% or greater. Satoshi discloses that its particles may be cross-linked to values within those claimed by applicants. See Translation, ¶ 9 (disclosing the cross-linking monomer is present in an amount of from 5-80% by weight). In addition, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. Degree of cross-linking of a particle in an ink-receptive layer is a conventional concern in the art, for it controls the porosity and hardness of the particle. See Translation, at ¶ 9 (disclosing that when the degree of cross-linking is too high, the particle becomes too brittle, and when it becomes too soft, insufficient porosity results). A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215. See MPEP § 716.02(a) (stating that evidence of unobvious or unexpected advantageous properties, such as superiority in a property the claimed compound shares with the prior art, can rebut prima facie obviousness). To date, this burden has not been sustained.

With regard to claims 5 & 6, applicants further claim the particles are made from an acrylic monomer such as ethylene glycol dimethacrylate. Satoshi discloses that its particles are made from ethylene glycol dimethacrylate. See Translation, ¶ 10.

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With regard to claim 9, applicants claim a particular method of preparing the particles. "The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 227 USPQ 964, 966. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art--as is the case here--the particles at issue, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983). See MPEP § 2113.

With regard to claims 10 & 11, applicants claim the porous particles possess a surface area value of at least about 35 m²/g / 100 m²/g. Satoshi discloses a surface area value within applicants claimed value. See Abstract and Translation, ¶ 6 (disclosing a surface area of its porous particles of 10 to 100 m²/g).

With regard to claims 12 & 13, applicants further claim the PVA is present in an amount of from about 0.4 to 5 g/m² and the particles in an amount of about 3 to 30 g/m². With regard to the claimed particle and binder values, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. The amount of binder and porous particle in an ink-receptive layer is a conventional concern in the art, for it controls the ink fixing and film forming properties of the layer. See Translation at ¶ 60 (stating that if the binder/particle ratio favors the binder outside the preferred range, the ink absorbing property of the layer is diminished, and that if the binder/particle ratio favors the particle component outside the preferred values, peeling and cracking of the layer results). A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215. See

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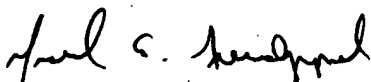
MPEP § 716.02(a) (stating that evidence of unobvious or unexpected advantageous properties, such as superiority in a property the claimed compound shares with the prior art, can rebut prima facie obviousness). To date, this burden has not been sustained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael E. Grendzynski whose telephone number is 703-305-0593. The examiner can normally be reached on weekdays, from 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on 703-308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-5408 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2351.



Michael E. Grendzynski
Assistant Examiner
March 21, 2003